Appl. No. 09/992,044 Amdt. Dated June 3, 2005

Reply to Office action of December 16, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the

application:

Listing of Claims:

1. (canceled)

2. (previously presented) A picture coding method as claimed in claim 22 wherein:

said predetermined target code amount is determined based upon a frame-skipping threshold

value corresponding to a threshold value used to judge as to whether or not a next picture is

coded.

3. (previously presented) A picture coding method as claimed in claim 22 wherein:

said predetermined target code amount is determined based upon the reference target code

amount.

4. (previously presented) A picture coding method as claimed in any one of claims 22,

2 or 3 wherein: a frame rate of an inputted picture is measured; and said reference coding

frame rate is determined based on said measured frame rate.

5. (original) A picture coding method as claimed in claim 4 wherein: said reference

coding frame rate is determined based upon a maximum value of said measured frame rate.

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6. (original) A picture coding method as claimed in claim 4 wherein said reference

coding frame rate is determined based upon an average value of said measured frame rates

within a constant time.

7. (original) A picture coding method as claimed in claim 6 wherein: in the case that

said reference coding frame rate is updated based upon the average value of the measured

frame rates within said constant time, when a reference coding frame rate before being

updated is larger than a reference coding frame rate after being updated, a value between said

reference coding frame rate before being updated and said reference coding frame rate after

being updated is used as the reference coding frame rate after being updated.

8. (currently amended) A picture coding apparatus for coding an inputted image to

output a compression picture signal, comprising:

a rate control unit for calculating a target code amount generated for every picture of

said inputted image to be coded; and

an output buffer for storing which temporarily stores a generated code until said

generated code is outputted from the picture coding apparatus; wherein:

said rate control unit controls a coding rate in such a manner that the target code

amount is automatically calculated by adding a correction value to a reference target code

amount which is approximately constant; and wherein

an amount of the generated code of said picture to be coded is approximated to said

calculated target code amount; and also wherein

said reference target code amount is calculated based upon a reference coding frame

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rate; and further wherein

said correction value is calculated based upon a difference between a predetermined target value and an actual value of a buffer code amount stored in said output buffer.

9. (previously presented) A picture coding apparatus as claimed in claim 8 wherein:

said predetermined target value is determined based upon a frame-skipping threshold value

corresponding to a threshold value used to judge as to whether or not a next picture is coded.

10. (previously presented) A picture coding apparatus as claimed in claim 8 wherein:

said predetermined target value is determined based upon the reference target code amount.

11. (original) A picture coding apparatus as claimed in any one of claims 8 to 10,

further comprising:

measuring means for measuring a frame rate of said inputted image; and wherein:

said reference coding frame rate is determined based on said measured frame rate.

12. (original) A picture coding apparatus as claimed in claim 11 wherein: said

reference coding frame rate is determined based upon a maximum value of said measured

frame rate.

13. (original) A picture coding apparatus as claimed in claim 11 wherein: said

reference coding frame rate is determined based upon an average value of said measured

frame rates within a constant time.

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14. (original) A picture coding apparatus as claimed in claim 13 wherein: in the case that said reference coding frame rate is updated based upon the average value of the measured frame rates within said constant time, when a reference coding frame rate before being updated is larger than a reference coding frame rate after being updated, a value between said reference coding frame rate before being updated and said reference coding frame rate after being updated is used as the reference coding frame rate after being updated.

15. (previously presented) An image relaying apparatus, comprising:

an image receiving unit to receive an image from an external image transmission unit, an image transmission unit to transmit an image to an external image receiving unit,

and

a picture coding unit for converting an image in a first image format received from the external transmission unit to a second image format suitable for the external receiving unit and also for transmitting said image in the second image format to the external receiving unit, wherein

the picture coding unit comprises:

a rate control unit for calculating a target code amount generated for every picture of an inputted image to be coded; and

an output buffer for storing a generated code until said generated code is outputted from the picture coding apparatus; wherein

said rate control unit controls a coding rate in such a manner that the target code amount is automatically calculated by adding a correction value to a reference target code amount which is approximately constant; and wherein

an amount of the generated code of said picture to be coded is approximated to said calculated target code amount; and also wherein

said reference target code amount is calculated based upon a reference coding frame rate; and further wherein

said correction value is calculated based upon a difference between a predetermined target value and an actual value of a buffer code amount stored in said output buffer.

16. (original) An image relaying apparatus as claimed in claim 15 wherein: said predetermined target value of the buffer remaining amount is determined based upon a frameskipping threshold value corresponding to a threshold value used to judge as to whether or not a next picture is coded.

17. (original) An image relaying apparatus as claimed in claim 15 wherein: said predetermined target value of the remaining buffer amount is determined based upon the reference target code amount.

18. (original) An image relaying apparatus as claimed in any one of claims 15 to 17, the picture coding unit further comprising: measuring means for measuring a frame rate of said inputted image; and wherein: said reference coding frame rate is determined based on said measured frame rate.

19. (original) An image relaying apparatus as claimed in claim 18 wherein said reference coding frame rate is determined based upon a maximum value of said measured frame rate.

20. (original) A picture coding apparatus as claimed in claim 18 wherein: said

reference coding frame rate is determined based upon an average value of said measured

frame rates within a constant time.

21. (original) An image relaying apparatus as claimed in claim 20 wherein in the case

that said reference coding frame rate is updated based upon the average value of the measured

frame rates within said constant time, when a reference coding frame rate before being

updated is larger than a reference coding frame rate after being updated, a value between said

reference coding frame rate before being updated and said reference coding frame rate after

being updated is used as the reference coding frame rate after being updated.

22. (currently amended) A picture coding method including the steps of:

providing a reference coding frame rate;

providing a predetermined target code amount of a coded picture to be temporarily

stored in a buffer in an apparatus;

calculating a substantially constant reference target code amount from said reference

coding frame rate;

determining a buffer remaining amount of a coded picture stored in said buffer and

not yet outputted by the apparatus;

calculating a correction code amount based on a difference between said

predetermined target code amount and said buffer remaining amount; and

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automatically calculating an allocation code amount for every picture to be coded by

adding said correction code amount to said reference target code amount.

23. (previously presented) The method of claim 22, wherein said calculated target

code amount is used to maintain said actual coded amount stored in the buffer near said

predetermined target code amount.